

Egerton University



Tegemeo Institute of Agricultural Policy and Development

EFFECTS OF GOVERNMENT MAIZE MARKETING AND TRADE POLICIES ON MAIZE MARKET PRICES IN KENYA

Tegemeo Working paper 15/2005

T.S. Jayne, Robert J. Myers, and James Nyoro

February 11, 2005

Report prepared for the World Bank

T. S. Jayne is Professor, International Development, Michigan State University. Robert J. Myers, is Professor, Michigan State University. James Nyoro is Director, Tegemeo Institute, Egerton University. This report was prepared with financial support from the World Bank, Washington DC. We also acknowledge the long-term capacity building support by USAID/Kenya for the Tegemeo Agricultural Monitoring and Policy Analysis (TAMPA) Project, under which most of the data and background knowledge for the analysis in this study was generated.

EFFECTS OF GOVERNMENT MAIZE MARKETING AND TRADE POLICIES ON MAIZE MARKET PRICES IN KENYA

1. Introduction

Maize is the main staple food in Kenya and is an important source of calories to a large proportion of the population in both urban and rural areas. Maize consumption is estimated at 98 kilograms per person per year, which translates to roughly 30 to 34 million bags (2.7 to 3.1 million metric tons) per year. Maize is also important in Kenya's crop production patterns, accounting for roughly 28 percent of gross farm output from the small-scale farming sector (Jayne et al., 2001).

Kenyan policy makers have been confronted by the classic "food price dilemma." On the one hand, policy makers are under pressure to ensure that maize producers receive adequate incentives to produce and sell the crop. Rural livelihoods in many areas depend on the viability of maize production as a commercial crop. On the other hand, the food security of the growing urban population and many rural households who are buyers of maize depends on keeping maize prices at tolerable levels. For many years, policy makers have attempted to strike a balance between these two competing objectives – how to ensure adequate returns for domestic maize production while keeping costs as low as possible for consumers. Maize marketing and trade policy has been at the center of debates over this food price dilemma, including discussions over the appropriateness of trade barriers and the role of government in ensuring adequate returns to maize production. The government has pursued its maize pricing and income transfer policies through (a) the activities of the National Cereals and Produce Board (NCPB), which procures and sells at administratively determined prices, and (b) restrictions on external maize trade through a variable maize import tariff. The effects of the NCPB's activities, and government maize trade policy more generally, on maize market price levels and volatility are both controversial and poorly informed by existing analysis. Given the importance of maize as an income source and as an expenditure item for both rural and urban households, there is a pressing need to understand the effects of government maize marketing and trade policies on

market price levels in order to begin to understand the welfare implications and distributional effects of these policies.

The objectives of this paper are to determine the effects of NCPB maize trading activity and the maize import tariff on wholesale maize market price levels and volatility. The analysis uses monthly maize price and trade data covering the period January 1990 to September 2004. Results are based on a vector autoregression (VAR) approach that allows estimation of a counterfactual set of maize prices that would have occurred over the 1990-2004 period had the NCPB not existed and trade restrictions been removed. We assess the separate impacts of policy on wholesale prices in Kitale, a major surplus-producing area, and Nairobi, the major urban demand center in the country. Results indicate that the NCPB's activities have indeed had a marked impact on both maize price levels and volatility, but the direction of the effect differed by period. During the 1993/94 drought period, for example, the NCPB appears to have reduced market prices through selling maize at steep discounts to the market. By contrast, since the 1995/96 season, the NCPB's operations have raised wholesale maize price levels in Kitale and Nairobi by 16.4 and 15.7 percent, respectively, implying a transfer of income from maize purchasing rural and urban households to relatively large farmers. The NCPB's activities have also reduced the standard deviation and coefficient of variation of prices as well, consistent with its stated mandate of price stabilization. Whether or not this reduction in price instability has introduced greater or lesser price risk for farmers cannot be inferred from this analysis and is the subject of further research.

The maize import tariff, on the other hand, despite generally being set at 20 to 30 percent over the sample period, appears to have raised market maize price levels by only 2 to 3 percent. Although the model cannot itself answer why this result obtains, we believe that these results are reasonable because of apparently widespread maize smuggling across borders, informal arrangements at border crossings that appear to reduce effective tariff rates, and trade reversals in several years. All of these factors would presumably weaken the impact of the tariff on Kenyan maize price levels.